

Subject: Fw: Fw: Interesting Groundwater study.
From: CN=Thomas Eaton/OU=R10/O=USEPA/C=US
Submit Time: 10/17/2012 20:36:41
To: "Karma Anderson" <Anderson.Karma@epamail.epa.gov>

Hi Karma

Can you confirm that Wa does not have any requirements for lagoons? I have the same question posed to Josh

Sent by EPA Wireless E-Mail Services
Eric Winiecki

----- Original Message -----

From: Eric Winiecki
Sent: 10/17/2012 01:31 PM PDT
To: Thomas Eaton
Cc: Edward Kowalski; Jennifer MacDonald; Karma Anderson
Subject: Re: Fw: Interesting Groundwater study.

I've read this study. Mr. Gordon's take-away messages are not the same as mine. Here are some key sentences from the executive summary:

"The purpose of the [groundwater] monitoring was to assess whether leakage from ponds affected ground water quality."

"Leakage from three of the four ponds affected ground water quality."

"Contaminant concentrations often exceeded drinking water standards and ground water quality standards."

"An inventory of ponds in Washington State located over shallow ground water is recommended to help define the extent of the problem."

A couple other points:

As far as I know there are no standards in place in Washington State about lagoons meeting any kind of permeability requirement. The "terrible" lagoons Mr. Gordon refers to could probably be legally built today.

There's no legal requirement to follow NRCS "standards" in Washington State... they are just suggestions unless you are building a lagoon with NRCS funds. My understanding is that some States require that NRCS standards be followed.

There's no reason to believe that lagoons built during that time period have been closed down or upgraded since then.

Thomas Eaton---10/17/2012 10:55:01 AM---FYI - info on dairy lagoons. I haven't had a chance to look at this yet, but thought you might be in

From: Thomas Eaton/R10/USEPA/US
To: Eric Winiecki/R10/USEPA/US@EPA, Edward Kowalski/R10/USEPA/US@EPA, Karma Anderson/R10/USEPA/US@EPA, Jennifer MacDonald/R10/USEPA/US@EPA
Date: 10/17/2012 10:55 AM
Subject: Fw: Interesting Groundwater study.

FYI - info on dairy lagoons. I haven't had a chance to look at this yet, but thought you might be interested

Tom Eaton
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USEPA, Region 10
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----- Forwarded by Thomas Eaton/R10/USEPA/US on 10/17/2012 10:52 AM -----

From: Washington State Dairy Federation -- <wsdf@msn.com>
To: dan Deruyter { **Personal Privacy/ Ex. 6** }, Dan DeGroot <dan@skyridgefarms.com>, Jason Sheehan { **Personal Privacy/ Ex. 6** }, STEVE GEORGE 05 <sageconsulting@bossig.com>, Bill Goeres { **Personal Privacy/ Ex. 6** }, Bill Dolsen <bill@dolsenco.com>, Adam Dolsen <adam@dolsenco.com>, Tom DeVries { **Personal Privacy/ Ex. 6** }, Bill Scheenstra { **Personal Privacy/ Ex. 6** }, tony Freeman 06 { **Personal Privacy/ Ex. 6** }, Tony Veiga 11 { **Personal Privacy/ Ex. 6** }, Hank Bosma { **Personal Privacy/ Ex. 6** }, Henry Bosma Jr. { **Personal Privacy/ Ex. 6** }, John & Jeff Bosma { **Personal Privacy/ Ex. 6** }, Stuart Turner <agforensic@aol.com>, David Haggith { **Personal Privacy/ Ex. 6** }, Fred Likkel { **Personal Privacy/ Ex. 6** }, Bill Wavrin { **Personal Privacy/ Ex. 6** }, John Banks <riverviewranch@embarqmail.com>, <lc@sydc.us>, <mark-nielson@conservewa.net>, <heatherwendt@conservewa.net>, Nichole Embertson <nembertson@whatcomcd.org>, <chamdairy2@nctv.com>, <foresterfarms@smwireless.net>, <suntonfarms@wildblue.net>, { **Personal Privacy/ Ex. 6** }, <eaglemill-jsx@comcast.net>, { **Personal Privacy/ Ex. 6** }, { **Personal Privacy/ Ex. 6** }, <jheeringadairy@webtv.net>, { **Personal Privacy/ Ex. 6** }, { **Personal Privacy/ Ex. 6** }, <andersonlwb@lewiscounty.com>, { **Personal Privacy/ Ex. 6** }, <steve.matzen@darigold.com>, { **Personal Privacy/ Ex. 6** }, <leclairfarms@valleyint.com>, <smitdairyfarm@hotmail.com>, <ccoles@agr.wa.gov>, <brian.linney@darigold.com>, { **Personal Privacy/ Ex. 6** }
Date: 10/17/2012 10:40 AM
Subject: Interesting Groundwater study.

To All,

Below are two links to a study that was done on four dairy lagoons around the state in the early 1990's. This is an interesting read on lagoons that were constructed in the "olden" days. First link is to the full report, it's about 40 pages and worth the time if you have it, but especially pages 28-40 have information that is enlightening.

Second link is the quick summary from Ecology at the time.

Note the two lagoons in Whatcom were unlined, dug deep and into pure glacial sand/gravel, bottom was at times below the aquifer ...all done **without** SCS guidance, engineering, design or to (NRCS) standards even in those days those lagoons had a clear impact, but the source of nitrates is questionable as lagoon or fields, but a clear impact- obvious you shouldn't put a lagoon in a gravel pit.

Then note the lagoon in Yakima that had initial indications of ammonia, but no nitrate attributed to lagoon and the lagoon was sealing.

And finally the Chehalis lagoon, which had some guidance on SCS/NRCS standards, but was unlined in clay soils and had **no nitrates or impact on aquifer.**

http://www.sec.nv.gov/cafo/tab_p.pdf

<https://fortress.wa.gov/ecy/publications/publications/92e26.pdf>

First AHA from this study is the absence of nitrates clearly linked to leaking lagoons, even terrible ones like a couple of these.

Second AHA is the Chehalis lagoon that is in clay, had some guidance from SCS and even with out a liner, had no impact.

Jay Gordon

Washington State Dairy Federation

Elma, Washington

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